

Docket Number  
36856.1439

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellant: Takayuki TSUKIZAWA et al.	
Application No.: 10/596,312	
Confirmation No.: 5223	Art Unit: 3729
Filing or 371(c) Date: June 8, 2006	Examiner: T. Phan
Title: METHOD FOR MANUFACTURING CHIP ELECTRONIC COMPONENT- MOUNTED CERAMIC SUBSTRATE	

**REPLY BRIEF**

Mail Stop Appeal Brief-Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Appellant is filing this Reply Brief in response to the Examiner's Answer, dated August 25, 2010, in connection with the above-identified application.

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**STATUS OF CLAIMS:**

Claims 16-25 are pending in this Application.

Claims 16-22 have been at least twice rejected over prior art and are the subject of this appeal.

Claims 23-25 have been withdrawn from consideration by the Examiner.

Claims 1-15 and 26-33 have been canceled.

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**GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL:**

The Examiner's rejection of Claims 16-22 under 35 U.S.C. § 102(b) as being anticipated by Sakamoto et al. (U.S. 6,228,196).

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**ARGUMENT:**

In the Examiner's Answer mailed August 25, 2010, the Examiner has maintained the rejection of Claims 16-22 under 35 U.S.C. § 102(b) as being anticipated by Sakamoto et al. (U.S. 6,228,196).

In Section No. (10) on pages 5 and 6 of the Examiner's Answer, the Examiner alleged:

In response to these remarks, the examiner had indicated in the Advisory Action (filed on 3/08/10) that Sakamoto et al (US 6,228,196) at a minimum do teach the firing (sintering) of the entire ceramic green unsintered body with an already embedded, preliminary baked or sintered component inside the body (Sakamoto et al, Col. 10, lines 46-49) and the appellants acknowledge that teaching (Remarks, page 10, last 2 paragraphs). Now, the appellants shift the arguments by claiming that teaching is being taught away (Remarks, page 11, 2nd paragraph) by Sakamoto et al. Therefore, that teaching or knowledge can not be applied in the rejection.

In response to these arguments about "teaching away", first Sakamoto et al do teach several embodiments of making multilayer circuit board, including one where there is the firing (sintering) of the entire ceramic green unsintered body with an already embedded, preliminary baked or sintered component inside the body (Sakamoto et al, Col. 10, lines 46-49) and Sakamoto et al is completely absent about providing a statement claiming to teach away from that embodiment. Second, by teaching a preferred way from several embodiments can not be assumed as teaching away all other less preferred embodiments in the specification.

Contrary to the Examiner's allegations, Appellant has not "shifted" its arguments and did not and has never acknowledged that Sakamoto et al. teaches that an embodiment of the invention thereof is formed by firing (sintering) of the entire ceramic green unsintered body with an already embedded, preliminary baked or sintered component inside the body. In contrast, Appellant has consistently maintained that Sakamoto et al. clearly teaches that the invention of Sakamoto et al. does not and should never include a preliminary baked passive component buried in a raw green unsintered composite compact because the combination of the preliminary baked

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passive component buried in the raw green unsintered composite compact is highly undesirable due to the requirement to strictly administrate the contraction behavior at the time of baking (see col. 10, lines 46-49 of Sakamoto et al.).

The Examiner's allegation "first Sakamoto et al do teach several embodiments of making multilayer circuit board, including one where there is the firing (sintering) of the entire ceramic green unsintered body with an already embedded, preliminary baked or sintered component inside the body (Sakamoto et al, Col. 10, lines 46-49)" is completely contrary to the teachings of Sakamoto et al. and completely mischaracterizes Sakamoto et al. The mention in Sakamoto of "firing (sintering) of the entire ceramic green unsintered body with an already embedded, preliminary baked or sintered component inside the body" is not a description of an embodiment of the invention of Sakamoto et al., but instead, is a description of a prior art method that produces undesirable disadvantages and as such, Sakamoto et al. expressly teaches that such a disadvantageous process should not be used in the invention of Sakamoto et al.

The Examiner recognizes and admits as much when the Examiner argues that reliance on the Background of the Invention of Sakamoto et al., including this mention of the undesirable disadvantageous conventional method described above, is allegedly proper to rely upon because "one of skill in the art can draw knowledge from" the Background of the Invention section of Sakamoto et al. As the Examiner is well aware, the Background of the Invention section of Sakamoto et al. does not describe embodiments of the invention of Sakamoto et al. and cannot be said to be part of the invention of Sakamoto et al., especially given the clear contrary teaching in Sakamoto et al. away from such an improper and unfounded assertion.

As discussed in more detail below, what one of ordinary skill in the art would draw from this portion contained in the Background of the Invention section of Sakamoto et al. is the clear and unequivocal conclusion that the undesirable disadvantageous conventional method involving "firing (sintering) of the entire ceramic green unsintered body with an already embedded, preliminary baked or sintered

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component inside the body" would produce undesired disadvantages and should be avoided.

It is clear that the Examiner is also improperly attempting to combine features of an undesirable disadvantageous conventional process described in the Background of the Invention section of Sakamoto et al. with an embodiment of the invention of Sakamoto et al. This is clearly improper for a rejection under 35 U.S.C. § 102(b) and would be improper for a rejection under 35 U.S.C. § 103(a) because it clearly and improperly ignores the unequivocal teaching away and detailed technical explanation and reasons explained in Sakamoto et al. as to why such a combination would have been improper and would have been completely lacking in motivation.

Turning now to the specific portion of Sakamoto et al. that the Examiner improperly relies upon, col. 10, lines 44-52 of Sakamoto et al. disclose, "Moreover, in these aspects of the present invention, **if the passive component is provided as the compact block, since a raw composite compact with the raw compact block buried therein is baked, compared with the case of baking in the state with a preliminarily baked passive component buried therein, the need of strictly administrating the contraction behavior at the time of baking can be eliminated**, and thus the selection range of the material to be used in a ceramic green sheet to be the laminated member can be widened" (emphasis added). The Examiner has improperly misconstrued the sentence "compared with the case of baking in the state with a preliminary baked passive component buried therein" as somehow indicating that the undesirable disadvantageous conventional method described in the above-quoted portion of Sakamoto et al. is a description of an embodiment of the invention of Sakamoto et al. However, this is clearly incorrect.

Neither this portion nor any other portion of Sakamoto et al. teaches or suggests any embodiment of the invention of Sakamoto et al. which could or should include an already embedded, preliminary baked or sintered component inside a ceramic green unsintered body. In fact, this portion of Sakamoto et al. makes it clear that one of ordinary skill in the art would never embed a preliminary baked or sintered component

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inside the body of the invention of Sakamoto et al., because doing so causes a problem of having to strictly administrate the contraction behaviors at the time of filing of the body.

Contrary to the Examiner's allegations, each and every embodiment of the invention disclosed in Sakamoto et al. includes a raw green unsintered composite compact with a raw green unsintered compact block buried therein that is baked, and as described above, col. 10, lines 46-49 of Sakamoto et al. clearly and specifically discloses that the invention of Sakamoto et al. does not and should never include a preliminary baked passive component buried in a raw green unsintered composite compact because the combination of the preliminary baked passive component buried in the raw green unsintered composite compact is highly undesirable due to the requirement to strictly administrate the contraction behavior at the time of baking.

Further, as explained in detail in the Appeal Brief filed on May 26, 2010, Sakamoto et al. not only fails to teach or suggest the feature of mounting a preliminary baked passive component in a raw green unsintered composite compact, but also clearly teaches away from mounting a ceramic sintered compact on or in a ceramic green unsintered body, and then firing the entire ceramic green unsintered body including the ceramic sintered compact therein as recited in Appellant's Claim 16.

Therefore, Sakamoto et al. certainly fails to teach or suggest the features and method steps of "mounting a chip electronic component including a ceramic sintered compact defining an element assembly and terminal electrodes on a ceramic green body having conductors thereon such that the terminal electrodes are brought into contact with the corresponding conductors" and "firing the ceramic green body having the chip electronic component so as to integrate the conductors on the ceramic green body with the corresponding terminal electrodes of the chip electronic component by sintering" as recited in Appellant's Claim 16.

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In view of the foregoing arguments and the arguments presented in the Appeal Brief filed on May 26, 2010, Appellant respectfully submits that the rejection of Claims 16-22 under 35 U.S.C. § 102(b) as being anticipated by Sakamoto et al. should be reversed and that Claims 16-22 are allowable. In addition, Appellant respectfully requests that the Examiner rejoin and allow non-elected Claims 23-26 which depend upon generic Claim 16, and is therefore allowable for the reasons that Claim 16 is allowable.

Respectfully submitted,

Dated: October 19, 2010

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